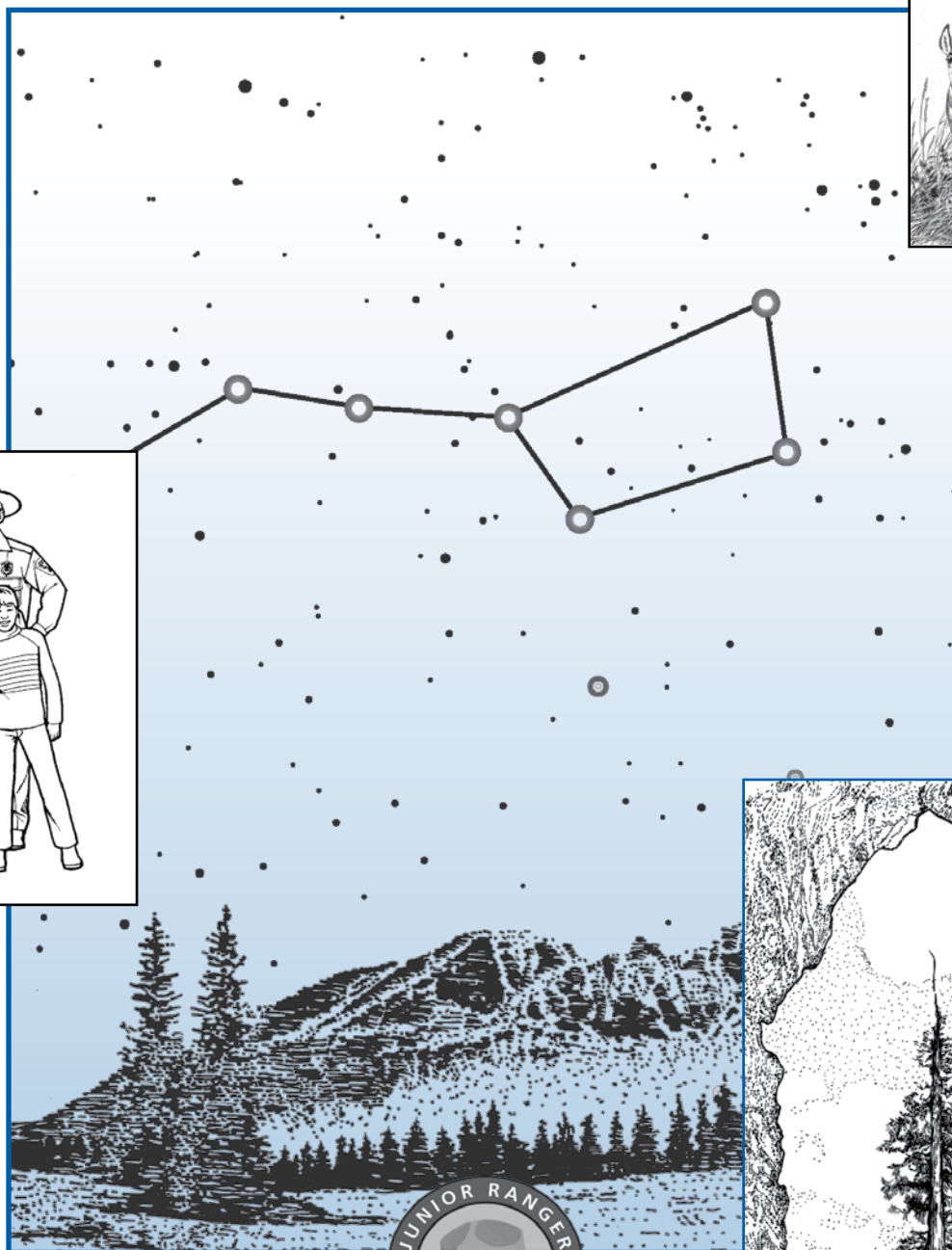
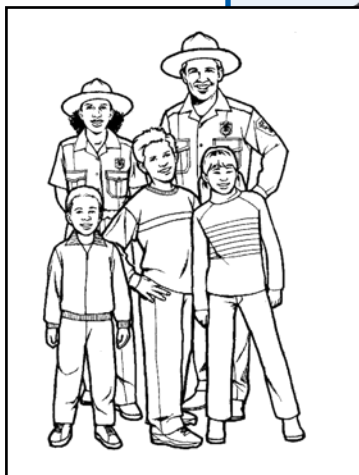
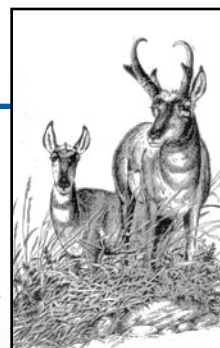


Great Basin

National Park and Lehman Caves



Discovering Great Basin National Park

A world of wonders fills Great Basin National Park—from deep in its dark caves to high in its starlit skies. Great Basin boasts towering mountains, tree-lined creeks, and groves of ancient bristlecone pines. Black-tailed jackrabbits and kangaroo rats hop through its deserts and grasslands. Bobcats and mountain lions prowl through its woodlands.



Enjoy Your Visit!

Follow these basic guidelines to help make your visit to Great Basin fun and safe:

- Drink plenty of water.
- Be prepared for sudden changes of weather (rain, snow, lightning, and so on).
- Remember to wear sunscreen and a sun hat.
- Remember that wildlife is really wild. Feeding, petting, or approaching wild animals endangers both you and them.
- Always travel with an adult you know.



Did You Know?

Most river and lake waters eventually drain to the ocean. But not so the Great Basin. Like a wash basin, the water that collects here stays in its center instead of escaping around the edges.



Become a Junior Ranger!



Explore Great Basin National Park with the activities in this booklet.
And you can become a Junior Ranger while you're at it. Here's how,

5 and under	Complete 3 activities
6 to 9	Complete 5 activities
10 and up	Complete 7 activities

Everybody also needs to take part in at least one of these four programs:

- ☐ **a cave tour**
- ☐ **an evening campground program**
- ☐ **a night sky program**
- ☐ **a ranger talk**

Then show your completed work to a ranger to receive a Junior Ranger badge!



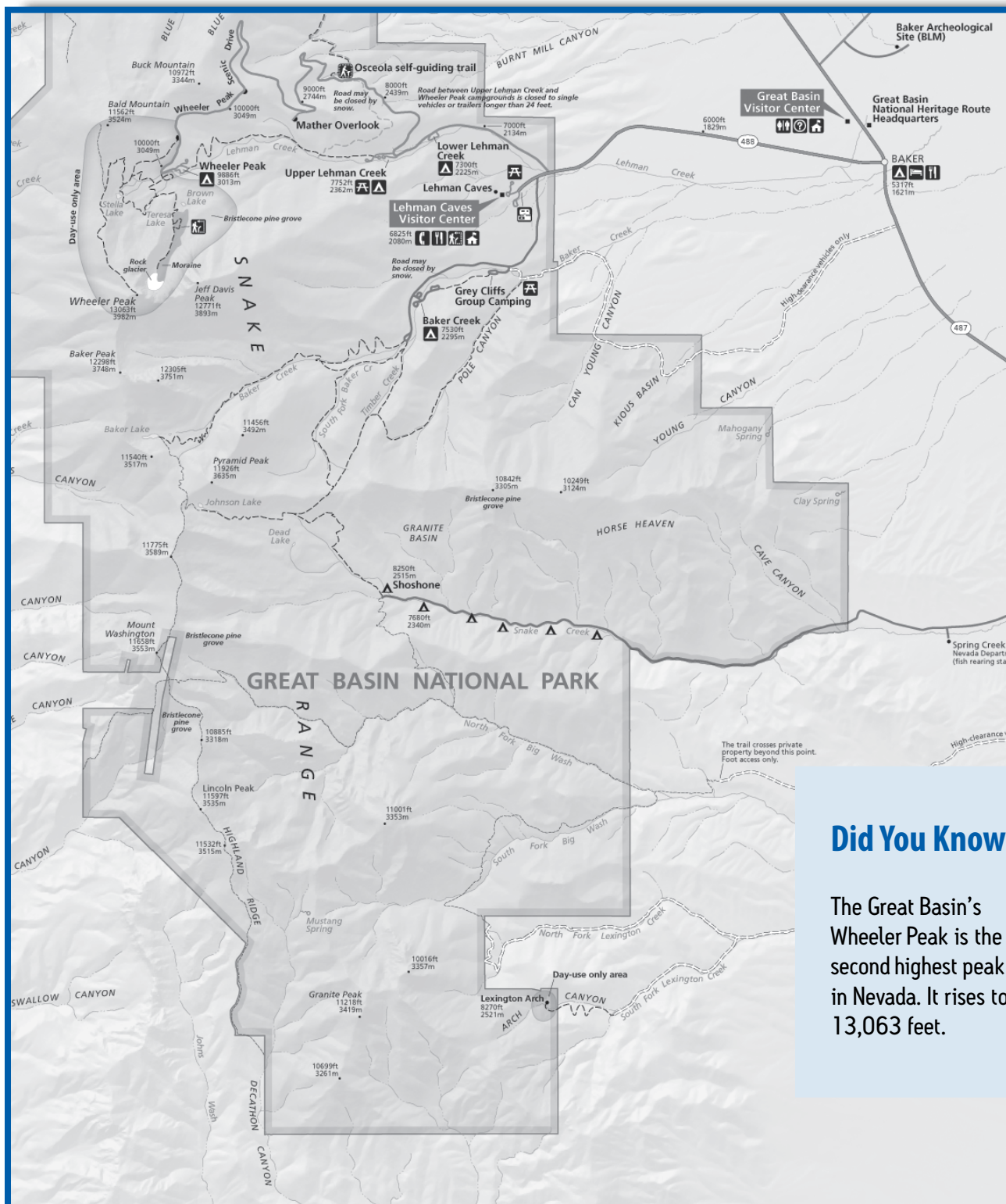
Where Is the Great Basin?

Here's a hint: If you're looking for a single object or place, you won't find it. Great Basin National Park is named for the basins (or valleys) and mountain ranges of a very large region. There isn't just one basin, but hundreds of them!



Map Your Visit!

Use the map below to chart your visit through Great Basin National Park. Draw a solid line to show where you traveled. Draw a dotted line to show where you hiked. Use pictures, words, or symbols to show what you did and saw along the way. For example, you might draw a bird where you spotted one by the road. Or you might describe the sounds you hear on a hiking trail.



Did You Know?

The Great Basin's Wheeler Peak is the second highest peak in Nevada. It rises to 13,063 feet.

Who Lives Where?

Did you know that going from the valley bottom to the summit of Wheeler Peak is like driving from Nevada to northern Canada, thousands of miles away? You start in desert. You end up in alpine meadows, a cold dry place where very little grows! These places, and each of the life zones in between, are called habitats. Habitats provide different animals and plants with the conditions they need to live.

DIRECTIONS: See if you can identify the animals. Each favors a different life zone. Choose from the creatures on the left side of the page and fill in the spaces beside each statement.

ANIMALS

Sage grouse



MOUNTAIN MEADOW (11,000-12,000+ feet)

Wildflower meadows fill the mountain areas that are too high even for trees to grow.

I'm a slender mammal that moves stealthily through the meadows in search of mice and other prey. I'm a _____

Short-tailed weasel



ALPINE FOREST (8,000-11,000 feet)

Mountain mahogany trees and different kinds of evergreen trees form these higher forests.

I'm a bird that hammers on old trees in search of my next insect meal. I'm a _____

Piñon jay



PIÑON-JUNIPER FOREST (7,000-8,000 feet)

These forests are dominated by nut-producing piñon pine trees.

I'm a bird named for the trees whose nuts I favor. My harsh, raspy, and raucous calls fill the forest air. I'm a _____

Pygmy rabbit



Downy woodpecker



SAGEBRUSH GRASSLANDS (6,000-7,000 feet)

Sagebrush-covered hills and grasslands are an important habitat, giving animals a wide variety of places to hide and plants to eat.

I'm a plump land bird named for the shrubs I depend on for food and shelter. I'm a _____

SALT DESERT (4,000-6,000 feet)

Deep in the valley, conditions are hot and very dry. The open country is spotted with saltbush and greasewood, which are short, scrubby bushes.

















I'm a secretive mammal less than 12 inches long. I hop out of my burrow at night to feed on grasses and other plants. I'm a _____

images: fws.gov

Did You Know? In early summer, sweltering heat may be baking Great Basin's desert floor, while snow may still be clinging to its peaks. Can you see snow on the peaks today?

Great Basin Bingo

Look for these things on your visit to Great Basin. When you find one, make your own sketch in the box. If you find 4 in a row, you're a raven. Find 4 corners and you're a mule deer. Find everything and you're a mountain lion!

Prickly poppy					
Sagebrush					
Rabbit					
Rock					
Butterfly					
Mule deer					
Aspen					
Raven					
Chipmunk					
Log					
Creek					
Pine cone					
Feather					
Berry					
Bird of Prey					
Beetle					

Did You Know?

Many of the plants and animals of the Great Basin have special adaptations that help them cope with the dry desert. Adaptations are physical traits or behaviors that make a species more suited to its environment. For example, kangaroo rats get water from some of the foods they eat! Imagine that you are an animal that lives in the Great Basin. What kinds of adaptations would you need to survive?

All about Caves

Great Basin has more than 40 caves. These caves form when acidic water cuts through rock, creating large holes. Over time, the movement of water fills the cave spaces with many interesting formations. These cave formations, or speleothems, are still growing and very fragile!

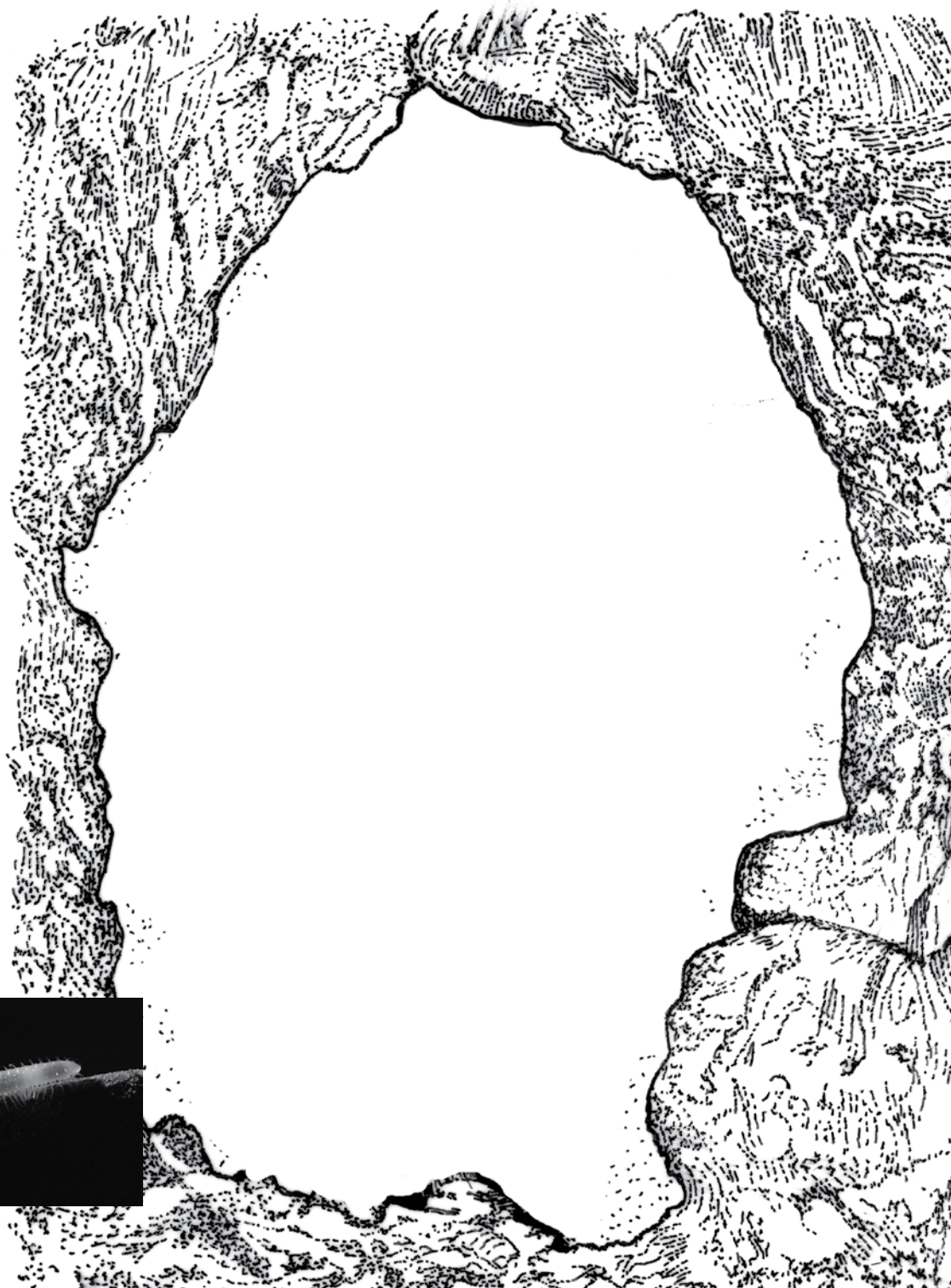
Use the list of cave formations on the left to create your own cave diagram. Hint: You can learn about these formations on a cave tour or by looking at the displays in the Lehman Caves Visitor Center.

stalactites
stalagmites
flowstone
drapery
helictes
shields
popcorn
cave bacon

Did You Know?

The caves at Great Basin National Park are home to Townsend's big-eared bats, pack rats, and many insects. Scientists recently discovered the Great Basin millipede in a local cave!

Photograph: Dr. Jean K. Krejca, Zara Environmental LLC



Bristlecone Pine Portrait

In good soil, bristlecone pine trees grow straight and tall and live a few hundred years. But high on the rocky peaks of the Great Basin, bristlecone pines grow slowly and twist into strange shapes. Their wood becomes so dense that it resists fungus, insects, and rot. As a result, some live to be almost 5,000 years old!

Follow these instructions to draw a portrait of a bristlecone pine tree. Then compare it to a real bristlecone pine in the park, or a picture in the visitor center.



Draw a fat trunk growing out of the rocky ground .

Extend the trunk upwards, showing it twisting and looking very gnarled (from the wind and the weather).

Add gnarled branches. Make these twisty, too.

Keep the whole tree short and stocky.

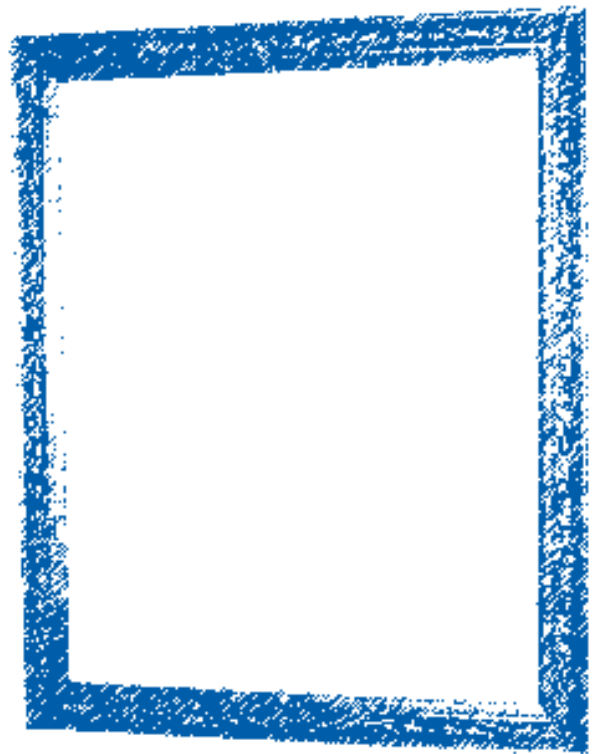
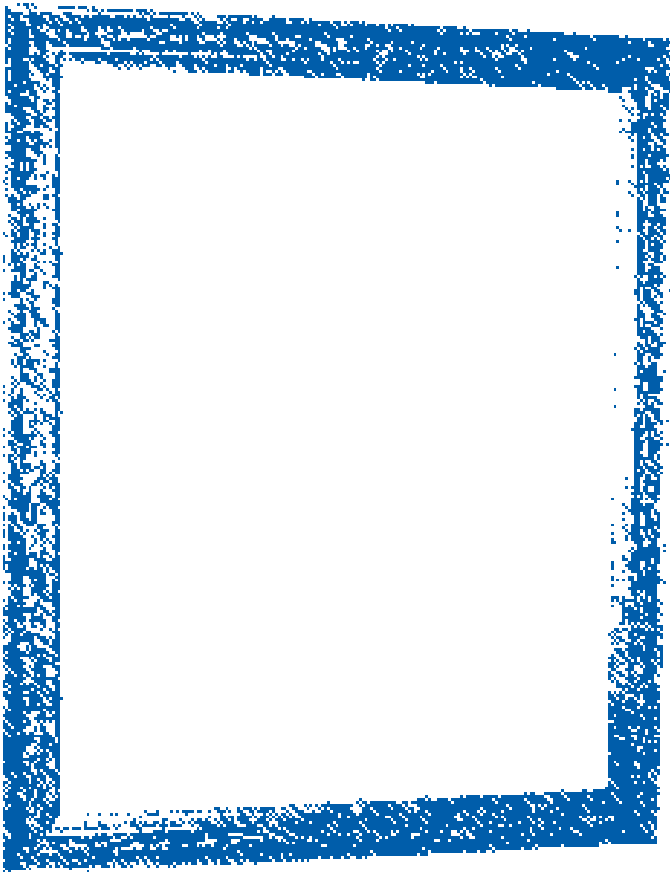
Draw smaller branches extending from the larger branches.

Add needles coming out all over the smaller branches. These should be in clusters of five.

Add pine cones to some of the branches.

How does your portrait compare to the real thing?

Now, make a second drawing from real life or a photograph.



The Stories of Trees

Even though bristlecone pines and other trees can't talk, they can tell us many interesting stories. Each ring on a tree is a year in its life. By looking carefully at those rings, we can learn about events in the past.

Take a close look at the rings of this tree, which blew down last year. Then follow these instructions:

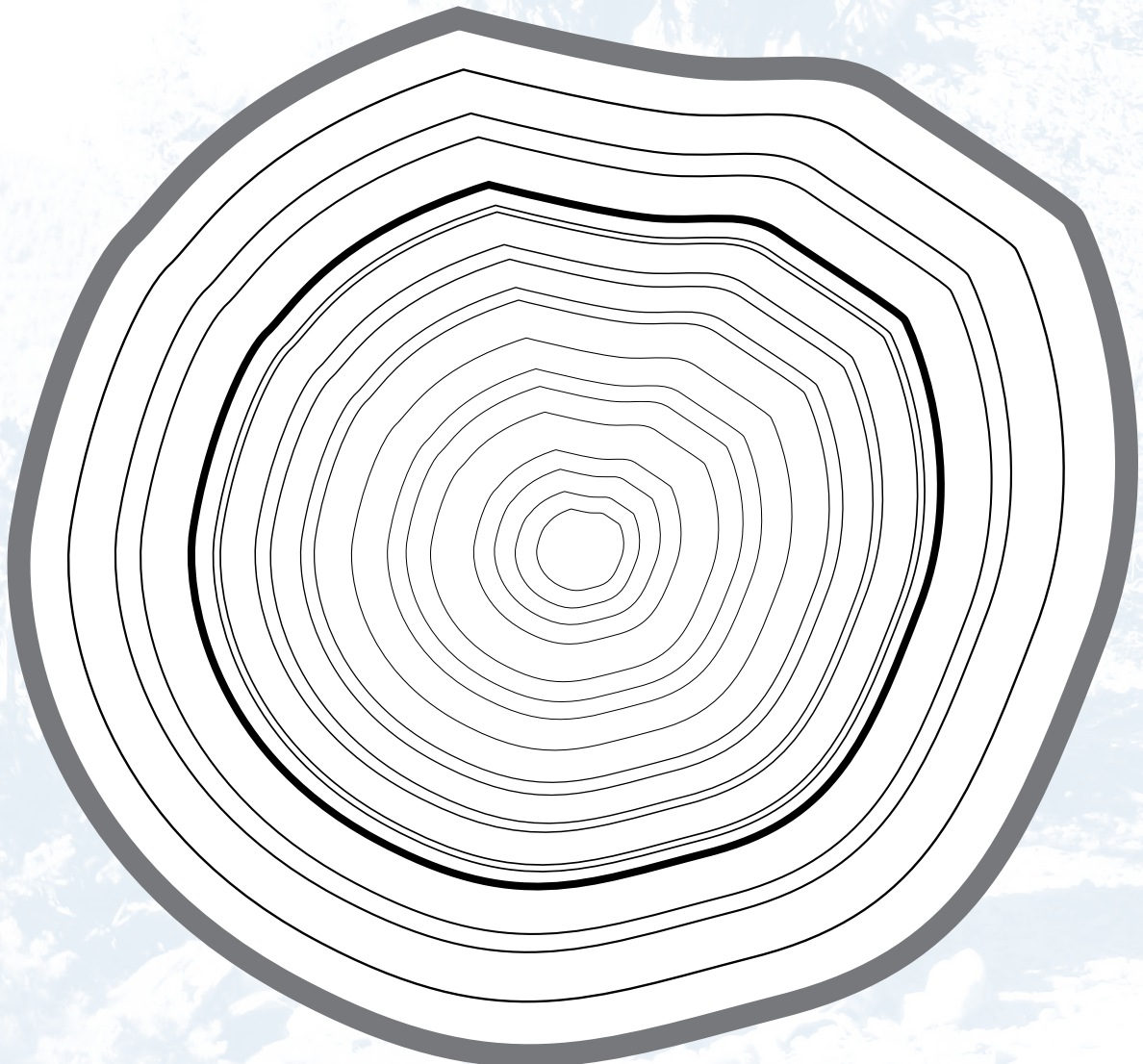
A narrow ring means it was a very dry year and the tree didn't grow much. With your pencil, fill in a ring representing one of these dry years.

A wide ring means it was a wet year, good for growth. Draw a zigzag line on a ring representing a wet year.

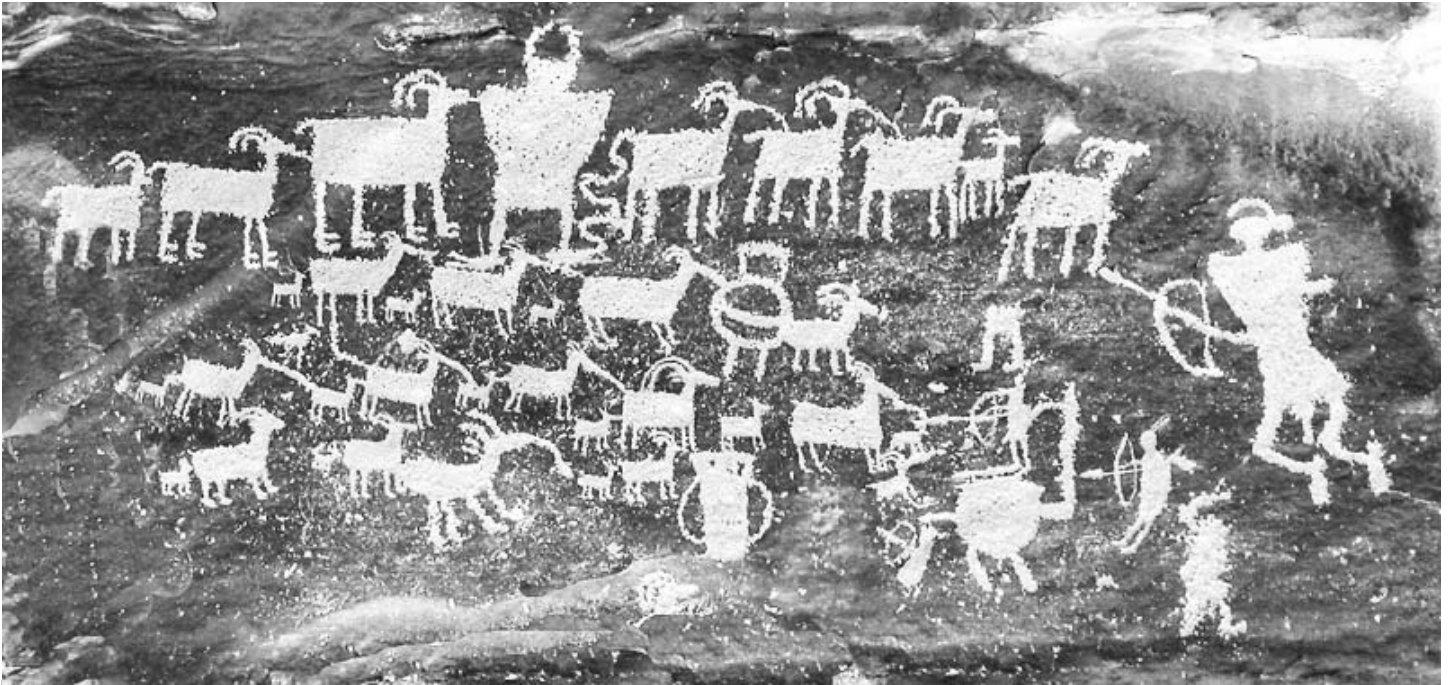
A dark line on a ring is a fire scar. In what year did this tree live through a fire? _____

How old was the tree when it died? _____

Can you find a ring representing the year when you were born? _____



Pondering Petroglyphs



Native Americans in the Great Basin drew pictures and symbols on rocks. Some are petroglyphs (pet-row-glifs)—images carved or pecked into rock using sharp stones or tools. Others are pictographs (pick-tow-grafs)—images painted with plant or mineral paints.

Take a look at the pictographs and petroglyphs above. They were made by the Fremont people, who lived in the Great Basin thousands of years ago. What do they make you think about? Write your ideas, or even a little story, in the space provided.

Make your own pictograph about your time in Great Basin National Park.

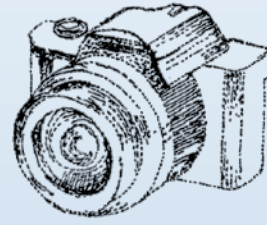


What's Wrong with this Picture?

National parks protect wild lands and wild animals



National parks protect wild lands and wild animals, as well as important historic places in our country. They have special rules to protect them. Look at the picture below. Can you find at least five things that should not be happening in a national park? Circle them. What can you do to help your national parks? _____



NIGHT WATCH

The habitats of Great Basin really come alive at night. Bats and common nighthawks swoop across the sky. Elk and deer emerge to feed on grasses. Moths flutter in the moonlit air.

Can you guess which nocturnal animal is responsible for the mysterious event described below? Use the code in the box to fill in the correct answer.



It's a beautiful night at Great Basin. You and your parents have set up a cozy campsite in the park and are getting ready to climb into your big tent and go to sleep. But first, your parents empty their pockets and place everything beside their boots. In the morning, your parents emerge from the tent and immediately notice that their car keys and coins are gone. What happened? You start to investigate around the campsite for clues. First you find some juniper bark and a pine cone near the spot where the keys were lying. You're pretty sure they weren't there before. You don't see any human footprints near the campsite and you doubt a coyote would take a set of car keys. Could an owl have picked up coins with its talons?

Then you remember something you've heard about a nocturnal animal that loves collecting stuff. You have a hunch you know who stole the keys and coins. . . and why!

Crack the Code

Answer	a	b	c	d	e	f	g	h	i	k	m	n	o	p	r	s	t	y
Code	x	y	z	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o



x k x z g l x n d l x y y b a

n e b m e f i b o f n b h m

c j l f n m i b m n

Did You Know?

Packrats store their collected treasures in a nest, called a midden. These middens can last for thousands of years. These treasure troves provide scientists, such as biologists and archeologists, with fascinating information about the past.

Stargazer Journal

If you've spent a night in Great Basin National Park, you've probably noticed the bright stars. That's because there's so little air pollution clouding the sky and so little light pollution. Light pollution is human-made light that glows strong enough to block our view of the stars. Record your observations of this special sky:

How bright is it on the ground? (lights from buildings, streetlights, and so on)

How clear or cloudy is the sky?

How many stars do you guess you can see from your home?

Circle which phase the moon is in.

NEW MOON



FIRST CRESCENT



FIRST QUARTER



WAXING GIBBOUS



FULL



WANING GIBBOUS



LAST QUARTER



OLD CRESCENT



Guess how many stars you can see tonight.

Now use this chart to see how many are possible, depending on your location and the weather.

TOTAL STARS POSSIBLY VISIBLE	LOCATION
22	LARGE CITY CENTER
893	SMALL TOWN
2,822	HOUSE IN THE COUNTRY
8,768	CAMPGROUND IN A NATIONAL PARK
32,533	DARKEST SPOT WITH CLEANEST AIR

A constellation (con-sta-lay-shun) is a group of stars that can be seen to form a shape, such as an animal or object. Invent a constellation based on several stars you see now. Draw it in the space below.

Listen up!

Visitors to Great Basin National Park may think this place is quiet. But is it really quiet, or are the sounds just different from those you hear at home? Try this activity to find out.

First, find a spot outside where you can sit or stand comfortably for a few minutes. Ask your family and friends to join you. Then close your eyes and listen quietly for one minute. List some of the sounds you have heard in the spaces below:

Natural sounds (made by plants, animals, the wind, and so on)

Human-made sounds (made by people, machines, and so on)

Nature sounds



Human sounds



When you get home, try this experiment again!

Nature sounds

Human sounds

Where did you hear more natural sounds? _____

Where did you hear more human-made sounds? _____

Your Turn

Use the space below to describe in words or pictures the most memorable part of your visit to Great Basin National Park.

[illegible][illegible]

Great Basin National Park and Lehman Caves



This booklet completed by _____ age _____ .

Name of program completed _____ .

Ranger's signature _____

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Sarah St. Antoine
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To learn more about WNP please visit our website at www.wnpa.org.
Become a WebRanger

As a WebRanger, you'll learn what Park Rangers do to help protect our natural
resources and our cultural heritage. You'll also learn how Park Rangers observe
and discover new things about our national parks—things to share with visitors
like you.

www.nps.gov/webangers/
www.wnpa.org



Junior Ranger Pledge

I am proud to be a Junior Ranger at Great
Basin National Park. I will continue to learn
about nature and all people so we can work
together to protect national parks and the
places we live.